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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,113

07/15/2003

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BRI/017

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08/13/2007

EXAMINER

CHANKONG, DOHM

ART UNIT

PAPER NUMBER

2152

MAIL DATE

DELIVERY MODE

08/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/620,113	Applicant(s) TEOWEE ET AL	
	Examiner Dohm Chankong	Art Unit 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: ____. |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :4/29/07, 5/18/06, 2/8/06, 1/31/06, 4/8/05.

DETAILED ACTION

- 1> Claims 1-20 are presented for examination.
- 2> This is a non-final rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 3> Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Here, Applicant's specification does not mention "optimizing the rate of transmission." The word "optimize" appears but once in Applicant's specification and the only in the discussion of prior art systems. The limitation in claim 4 should be amended to clearly reflect how the rate of transmission is "optimized" and to be consistent with what is described in Applicant's specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4> Claims 1, 3, 13, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 1, 13, and 17 are rejected for reciting "one or a few substantially fixed values." The terms "few" and "substantially" are relative terms which render their respective claims indefinite. The terms "few" and "substantially" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

b. Claim 3 is rejected for lacking proper antecedent basis: "the possible rate of transmission" and "*the limit* of the possible rate";

c. Claim 3 is also rejected for reciting that "conditions are not precisely known." It is not clear what the term "precisely" adds to the claim limitation. Either the conditions are known or not.

d. Claim 3 is also rejected for reciting that the rate of transmission is altered "if necessary." The claim should be amended to affirmatively define when it is necessary to alter the rate of transmission instead of writing the claims in vague conditional language;

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e. Claim 8 is rejected for reciting: "said other data are at least partly responsive to said commands." The term "partly" is a relative term which renders the claim indefinite. The term "partly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

f. Claim 8 is also rejected for lacking proper antecedent basis: "said other data."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5> As a preliminary matter, it is noted that claims 1, 2, 13 and 17 rely on the term "may" in the claims ("rate of transmission that may fall", "may vary"). Applicant is reminded that language that suggests *but does not require* steps to be performed does not limit the scope of the claim. MPEP §2111.04. For example, in claim 1, the term "may" merely suggests that the rate of transmission may fall anywhere within at least one continuous range, but it is not required. Similar remarks apply to claims 2, 13, and 17. The claims would be better served if they were amended to more definitely define the steps that must be performed.

It is further noted that, claims 1, 13, and 17 contain language directed merely towards

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intended use and therefore also have limited value to the claim's scope. "Wherein" clauses generally raise a question as to the limiting effect of the language of a claim. Id. Claim 1 recites a receiving step "wherein said step of receiving does not require said rate of transmission to be selected from one or a few substantially fixed value(s) within said range which value(s) are determined prior to said step of receiving." This clause is entirely directed to the intended use of the receiving step.

Examiner suggests amending the claims to recite the actual steps that when performed provide the desired functionality, rather than simply describing the desired functionality as Applicant has done in the current claims. Here, Applicant should include affirmative steps of the method that when performed enable the functionality of not requiring the rate of transmission to be selected from one or a few substantially fixed values.

Currently, the only actual steps performed in method claim 1 are: (1) transmitting data that includes synchronization bits and bits conveying other information; and (2) receiving said transmitted data by the following steps: (i) ascertaining the rate of transmission of said synchronization bits; and, (ii) receiving, at the ascertained rate of transmission, said bits representing other information. Only these steps define the scope of Applicant's independent claims as the other language either merely suggests possible steps or are directed towards the intended use of the method.

6> Claims 1, 2, 6, and 10-14 are rejected under 35 U.S.C §102(e) as being anticipated by Kuznicki, U.S Patent No. 5,282,205.

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7> As to claim 1, Kuznicki discloses a method of transferring data comprising the following steps:

transmitting, at a rate of transmission that may fall anywhere within at least one continuous range, data that includes synchronization bits and bits conveying other information [column 5 « line 64» to column 6 «line 4» where : Kuznicki's synchronization code is analogous to Applicant's claimed synchronization bits. The code is sent with eleven data blocks | column 19 «lines 41-59» where : the system provides "true variable speed" signaling that allows for progressing from a low to high transmission speed]; and,

receiving said transmitted data by the following steps:

ascertaining the rate of transmission of said synchronization bits [column 7 «lines 6-10»]; and,

receiving, at the ascertained rate of transmission, said bits representing other information [column 6 «line 60» to column 7 «line 10»];

wherein said step of receiving does not require said rate of transmission to be selected from one or a few substantially fixed values within said range which values are determined prior to said step of receiving.

8> As to claim 2, Kuznicki discloses said rate of transmission may vary during said step of transmitting [column 6 «lines 58-68»].

9> As to claim 6, Kuznicki discloses said step of transmitting is performed by a master device [abstract where : Kuznicki's data communication terminal is a master device] and said

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step of receiving is performed by a slave device [abstract : where Kuznicki's plurality of communication receivers are slave devices].

10> As to claims 10-12, Kuznicki discloses said data includes one or more packets each comprising more than one word [column 5 « line 64» to column 6 «line 4»], and said packet includes two or more words containing synchronization bits [Figure 4 | column 5 «line 64» to column 6 «line 4» where : a subscriber code comprises one block, where each block includes 8 words], wherein within at least one word containing synchronization bits, said synchronization bits precede bits conveying other information [Figure 4].

11> As to claims 13 and 14, they are merely a device that implements the steps of the method of claims 1 and 6. Therefore, claims 13 and 14 are rejected for at least the same reasons set forth for claims 1 and 6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12> Claims 3, 4, 7, 8, 15, and 17-19 are rejected under 35 U.S.C §103(a) as being unpatentable over Kuznicki, in view of Laturell et al, U.S Patent No. 6,404,780 [“Laturell”].

13> As to claim 3, Kuznicki discloses the steps of:

establishing a system having encountered transmission conditions limiting the rate of transmission on said system, which conditions are not precisely known in advance of establishing said system but are encountered after establishment of the system, wherein said steps of transmitting and receiving are performed over said system [column 14 «lines 21-25» where : excess messages can affect the “message transmission rate”]; and

altering said rate of transmission so as to equal a rate that is within the limit of the possible rate of transmission under said encountered transmission conditions [column 14 «lines 25-36»].

Kuznicki does not expressly disclose a bus. Like Kuznicki, Laturell discloses a method for establishing a system for transferring data [abstract]. Laturell discloses synchronizing slave devices over a serial data bus using control words [abstract | column 3 «lines 43-46»]. It would have been obvious to one of ordinary skill in the art to incorporate Laturell's teaching of a serial bus to synchronize devices into Kuznicki's system. One would have been motivated to modify Kuznicki because adding a serial bus between Kuznicki's transmitters and receivers would enhance the functionality of Kuznicki's system by increasing the types of communications with which Kuznicki would be compatible.

14> As to claim 4, Kuznicki discloses said step of altering further includes the step of optimizing said rate of transmission under said encountered transmission conditions

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[column 19 «lines 41-59» where : the system provides “true variable speed” signaling that allows for progressing from a low to high transmission speed].

15> As to claim 7, Kuznicki does not expressly disclose the step of transmitting other data back from said slave device to said master device at a rate of transmission determined in step b) (of claim 1). Laturell discloses the step of transmitting other data back from said slave device to said master device at a previously determined rate of transmission [column 5 «lines 9-15» | column 6 «lines 27-38»].

It would be obvious to one of ordinary skill in the art to have incorporated Laturell's teachings into Kuznicki. It would have been obvious to reasonably infer that because the communications between master and slave devices are synchronized to a specified data transmission rate, then the slave device would transmit data to the master device at the specified synchronized rate. Thus this functionality is reasonably implied in Kuznicki's synchronized system.

16> As to claim 8, Kuznicki discloses commands are transmitted in step (a) and said other data are at least partly responsive to said commands [column 5 «line 64» to column 6 «line 4» where : Kuznicki's control words are analogous to commands].

17> As to claims 15 and 19, they are merely directed to a device and a system, respectively, that implement the steps of the method of claim 7. Therefore, claims 15 and 19 are rejected for at least the same reasons set forth for claim 7.

18> As to claim 17, it is merely a system that implements the steps of the method of claims 1, 3, and 6. Therefore, claim 17 are rejected for at least the same reasons set forth for claims 1, 3, and 6.

19> As to claim 18, it is merely a system that implements the steps of the method of claim 3. Therefore, claim 18 are rejected for at least the same reasons set forth for claim 3.

20> Claim 5 is rejected under 35 U.S.C §103(a) as being unpatentable over Kuznicki and Laturell, in further view of Rubbmark et al, U.S Patent No. 6,012,105 ["Rubbmark"].

21> As to claim 5, Kuznicki does not disclose a 2-line serial bus for communicating between the devices. Rubbmark discloses a 2-line serial bus that enables for synchronization between a master and slave device [column 5 «lines 33-36 and 43-47»]. It would have been obvious to one of ordinary skill in the art to incorporate Rubbmark's teaching of a 2-line serial bus interface into Kuznicki's data transfer system. The 2-line serial bus interface is well known in the art and provides useful benefits for transferring operating parameters between advanced electronic devices [see Rubbmark, column 2 «lines 16-20»]. One would therefore have been motivated to incorporate the 2-line serial bus into Kuznicki's system in order to be able to transfer complex operating parameters between master and slave devices.

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22> Claims 9, 16 and 20 are rejected under 35 U.S.C §103(a) as being unpatentable over Kuznicki and Laturell, in further view of Hallin et al, U.S Patent Publication No. 2003|0136289 ["Hallin"].

23> As to claim 9, Kuznicki does not expressly disclose a detonator or a blasting machine. Hallin discloses an electronic detonator system for synchronizing communications between a detonator (slave) and a blasting machine (master) [abstract | 0011-0015].

It would have been obvious to one of ordinary skill in the art to modify Kuznicki's system to include Hallin's slave detonators and master blasting machines. One would have been motivated to perform such a modification to enhance the functionality of Kuznicki's synchronization system by increasing the number of devices with which Kuznicki would be compatible. There is a reasonable expectation of success because Hallin discloses utilizing digital data packets over a bus between the detonators and the blasting machine [0014, 0021] which is analogous to Kuznicki and Laturell's system.

24> As to claims 16 and 20, they are merely directed to a device and a system, respectively, that implement the steps of the method of claim 7. Therefore, claims 15 and 19 are rejected for at least the same reasons set forth for claim 7.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

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Casper et al, U.S Patent No. 5,838,749;


Nicholl et al, U.S Patent No. 6,937,568.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DC


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SUPERVISORY PATENT EXAMINER

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